Parallel sort

1

As we can see from the results that number for threads goes high as the cut-off is low as compared to the array size

cut-off: 312500
cut-off: 156250
cut-off: 1250000
cut-off: 78125
cut-off: 312500
cut-off: 312500
cut-off: 1250000
cut-off: 2500000
cut-off: 2500000
cut-off: 78125
cut-off: 156250
cut-off: 2500000
cut-off: 156250
cut-off: 156250
cut-off: 312500
cut-off: 156250
cut-off: 2500000
cut-off: 1250000
cut-off: 156250
cut-off: 2500000
cut-off: 1250000
cut-off: 156250
sorting time: 1280.0 cut-off: 25000 Thread count: 42

2

IF the cut off is nearly equal to or higher than the array size it uses the system sort and the time require to sort the array is equally high

cut-off: 20000000
sorting time: 1834.0 cut-off: 25000000 Thread count: 0

3

if the array size is very less then parallel sort does not occur and system sort takes place

cut-off: 200
sorting time: 0.0 cut-off: 2500000 Thread count: 0